

What is claimed is:

5 1. A method for scrolling an image to be presented on a display unit comprising the steps of:

storing image data of a first image area in a frame buffer, wherein the first image area is larger than a second image area that can be presented on the display unit and contains the second image area;

10 addressing the frame buffer in a manner dependent on first address information items that define the position of the second image area within the first image area, and reading corresponding image data from the frame buffer and presenting the corresponding image data on the display unit in the form of the second image area;

15 changing the first address information items in order to scroll the second image area presented on the display unit;

20 subdividing the first image area into a plurality of image area sections and assigning the image data of a corresponding memory section of the frame buffer to each image area section through the use of corresponding second address information items;

25 defining a boundary for the position of the second image area within the first image area by utilizing the first address information items;

monitoring the position of the second image area within the first image area with respect to the boundary; and

loading new image data into specific memory sections of the frame buffer that are assigned to the image area sections of the first image area that are the furthest away from a specific boundary location in a direction opposite to a scrolling direction when the boundary is reached at the specific boundary location on account of scrolling of the second image area, and correspondingly changing the second address information items in such a way that the first image area is extended in the scrolling direction by the image area sections which are the furthest away from the specific boundary location in the direction opposite to the scrolling direction and for which new image data have been loaded into the specific memory sections.

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2. The method according to claim 1, wherein the first address information items and the second address information items are configured in the form of pointers.

3. The method according to claim 1, wherein after the new image data is loaded into the specific memory sections, the second address information items are changed and the first image area, the boundary and the

first address information items defining the position of the second image area within the first image area are correspondingly changed.

5 4. The method according to claim 1, wherein one or more of the first image area, the second image area, the boundary and the individual image area sections of the first image area are defined in rectangular form.

10 5. The method according to claim 1, wherein for the case when the boundary is reached at a specific boundary location on account of scrolling of the second image area, only those memory sections of the frame buffer are loaded with the new image data which are assigned to the image area sections of the first image area which are the furthest away from the said specific boundary location in the opposite direction to the scrolling direction.

6. The method according to claim 1, wherein the second address information items each have a fixed assignment to a corresponding image area section within the first image area.

25 7. The method according to claim 1, wherein the first image area is subdivided into 16 image area sections.

8. The method according to claim 1, wherein the first image area is set to be four times as large as the second image area that can be presented on the display unit.

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9. The method according to claim 8, wherein the width and the height of the first image area are both set to be twice as large as the respective width and height of the second image area that can be presented 10 on the display unit.

10. The method according to claim 1, wherein each memory section of the frame buffer is configured for storing the image data of an image area section having 15 512 × 384 pixels.

11. An apparatus for scrolling an image to be presented on a display unit, comprising:

a frame buffer configured for storing image data 20 of a first image area, wherein the first image area is larger than a second image area that can be presented on the display unit and contains the second image area;

a memory configured for storing first address information items, which define the position of the 25 second image area within the first image area; and

a control system configured for addressing the frame buffer in a manner dependent on the first address

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information items and for reading corresponding image data from the frame buffer in order to present the image data on the display unit in the form of the second image area, wherein the second image area to be 5 presented on the display unit can be scrolled by changing the first address information items;

wherein the first image area is subdivided into a plurality of image area sections and the image data of a corresponding memory section of the frame buffer are 10 assigned to each image area section through the use of corresponding second address information items, which are stored in the memory; a boundary is defined for the position of the second image area within the first image area by utilizing the first address information 15 items; and

wherein the control system is further configured to monitor the position of the second image area within the first image area with respect to the boundary and, in a case when the boundary is reached at a specific 20 boundary location on account of scrolling of the second image area, the control system causes memory sections of the frame buffer, which are assigned to the image area sections of the first image area that are the furthest away from the specific boundary location in a 25 direction opposite to a scrolling direction, to be loaded with new image data and change the second address information items stored in the memory such

that the first image area is extended in the scrolling direction by the image area sections that are the furthest away from the specific boundary location in the opposite direction to the scrolling direction and 5 for which new image data have been loaded into the corresponding memory sections of the frame buffer.

12. The apparatus according to claim 11, wherein the first address information items and the second 10 address information items are configured in the form of pointers.

13. The apparatus according to claim 11, wherein the control system is configured in such a way that 15 after the loading of new image data into the specific memory sections, the second address information items are changed and the first image area, the boundary and the first address information items defining the position of the second image area within the first 20 image area are correspondingly changed.

14. The apparatus according to claim 11, wherein one or more of the first image area, the second image area, the boundary and the individual image area 25 sections of the first image area are defined in rectangular form.

15. The apparatus according to claim 11, wherein the control system is configured in such a way that, in the case when the boundary is reached at a specific boundary location on account of scrolling of the second image area, only those memory sections of the frame buffer that are assigned to the image area sections of the first image area furthest away from the specific boundary location in the opposite direction to the scrolling direction are loaded with the new image data.

16. The apparatus according to claim 11, wherein the second address information items each have a fixed assignment to a corresponding image area section within the first image area.

17. The apparatus according to claim 11, wherein the first image area is subdivided into 16 image area sections.

18. The apparatus according to claim 11, the first image area is set to be four times as large as the second image area that can be presented on the display unit.

19. The apparatus according to claim 18, wherein
25 the width and the height of the first image area are
set to be twice as large as the respective width and

height of the second image area that can be presented on the display unit.

20. The apparatus according to claim 11, wherein
5 each memory section of the frame buffer is configured for storing the image data of an image area section having 512 384 pixels.